

Recombinant Human Angiopoietin 2, Myc-tagged

Cat. No. ANGPT2-116H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Angiopoietin-2 (Ang-2), a 66 kDa protein consisting of 476 amino acid residues (N21-F496), is fused to an N-terminal myc-tag and produced in <i>insect cells</i> .
Species	Human
Source	Insect Cells
Protein Length	21-496 a.a.
Description	The angiopoietin (Ang) family of growth factors includes four members, all of which bind to the endothelial receptor tyrosine kinase Tie2. Two of the Angs, Ang-1 and Ang-4, activate the Tie2 receptor, whereas Ang-2 and Ang-3 inhibit Ang-1-induced Tie2 phosphorylation. Angiopoietin-1 (Ang-1) is a secreted growth factor which binds to and activates the Tie-2 receptor tyrosine kinase. The factor enhances endothelial cell survival and capillary morphogenesis, and also limits capillary permeability. Ang-2 binds the same receptor but fails to activate it: hence, it is a natural inhibitor of Ang-1. Ang-2 destabilises capillary integrity, facilitating sprouting when ambient vascular endothelial growth factor (VEGF) levels are high, but causing vessel regression when VEGF levels are low. Tie -1 is a Tie -2 homologue but its ligands are unknown. Angiopoietin and Tie genes are expressed in the mammalian metanephros, the precursor of the adult kidney, where they may play a role in endothelial precursor growth. Tie-1-expressing cells can be detected in the metanephros when it first forms and, based on transplantation experiments, these precursors contribute to the

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	generation of glomerular capillaries.
Physical Appearance	Sterile Filtered white lyophilized freeze dry powder.
Purity	Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Formulation	The protein is formulated with no additives.
Solubility	It is recommended to reconstitute the lyophilized Angiopoitin-2 in sterile 18MΩ-cm H ₂ O not less than 100g/ml, which can then be further diluted to other aqueous solutions.
Biological Activity	The biological activity was determined by the induction of endothelial cell sprouting as described in Korff et al., 2001.
Protein Content	Protein quantitation was carried out by two independent methods: 1. UV spectroscopy at 280 nm using the absorbency value of 1.4 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics). 2. Analysis by RP-HPLC, using a standard solution of ANG-2 as a Reference Standard.
Storage	Lyophilized Angiopoietin 2 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Angiopoitin-2 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name [ANGPT2 angiopoietin 2 \[Homo sapiens \]](#)

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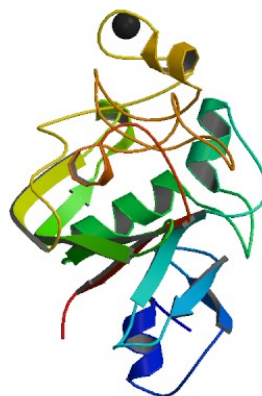
Synonyms	ANGPT2; angiopoietin 2; ANG2; AGPT2; Tie2-ligand; angiopoietin-2; angiopoietin-2B; angiopoietin-2a; Ang2; ANG-2
Gene ID	285
mRNA Refseq	NM_001118887
Protein Refseq	NP_001112359
MIM	601922
UniProt ID	O15123
Chromosome Location	8p23
Pathway	Hemostasis; Signaling in Immune system
Function	receptor binding

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PDB rendering based
on 1z3s.



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